

REMARKS

Formal Matters

Claims 1-48 are pending after entry of the amendment set forth herein.

Claims 31-48 were examined. Claims 31-48 were rejected.

Claims 31, 32, 36, 39, 40, 41, 47 and 48 are amended. The amendments to the claims were made solely in the interest of expediting prosecution, and are not to be construed as an acquiescence to any objection or rejection of any claim. Support for the amendments is found in the claims as originally filed, and throughout the specification, in particular at the following exemplary locations: page 12, line 4-7 and page 5, lines 17-24. Accordingly, no new matter is added by these amendments.

Applicants respectfully request reconsideration of the application in view of the remarks made herein.

Drawings

The Office Action states that Fig. 1 should be designated by a legend such as "Prior Art" since it describes that which is old.

The Applicants submit herewith a proposed drawing correction, shown in red ink, and a corrected drawing. Acceptance of this proposed correction is respectfully requested.

Claim objections

Claim 47 is objected to for failing to further limit the subject matter of a previous claim.

Without acquiescing to the correctness of this rejection, the dependency of claim 47 has been amended. It is now dependent on claim 40.

The Applicants respectfully submit that claim 47 is not of improper dependent form and the rejection may be withdrawn.

Rejections under 35 U.S.C. §112, second paragraph

Claims 31-39 are rejected as indefinite assertedly because claim 31 is drawn to a process for preparing a solid support but does not describe solid support preparation.

Without acquiescing to the correctness of this rejection, claim 31 has been amended, and recites "providing a solid support" in step (a) and "polymerizing said monomers to produce a solid support having..." in step (c). The Applicants respectfully submit that claim

31 clearly describes a method for solid support preparation, and, as such, is not indefinite.

In view of the foregoing discussion, withdrawal of this rejection is respectfully requested.

Claims 39 and 48 are rejected as indefinite assertedly because they are unclear as to which method steps are limited by the claims.

Without acquiescing to the correctness of this rejection, claims 39 and 48 have been amended to recite “further comprising polymerizing an additional non-nucleotidic polymer tethered to said surface coating...”. The Applicants respectfully submit that claims 39 and 48 are clear as to which method steps are being limited, and, as such these claims are not indefinite.

In view of the foregoing discussion, withdrawal of this rejection is respectfully requested.

Claims 40-48 are rejected as indefinite assertedly because claim 40 is drawn to a process for preparing a solid support but does not describe solid support preparation.

Without acquiescing to the correctness of this rejection, claim 40 has been amended, and recites “providing a solid support” in step (a) and “polymerizing said monomers to produce a solid support having...” in step (c). The Applicants respectfully submit that claim 40 clearly describes a method for solid support preparation, and, as such, is not indefinite.

In view of the foregoing discussion, withdrawal of this rejection is respectfully requested.

Claims 32 and 41 are rejected as indefinite assertedly because it is unclear to what “thereto” refers.

Without acquiescing to the correctness of this rejection, the Applicants have amended these claims to recite “exogenous to said biomolecule”.

The Applicants respectfully submit that the meaning of these claims is clear. Withdrawal of this rejection is respectfully requested.

Rejection of claims under 35 U.S.C. § 102 (Heller USPN 6,281,006)

Claims 31-48 are rejected under 35 U.S.C. § 102(e) over Heller *et al.* (USPN 6,281,006). Specifically, the Office Action asserts that Heller *et al.* discloses a process for preparing a solid support that anticipates the subject claims. The Applicants respectfully

traverse this rejection.

All the rejected claims are directed to methods in which monomers for a polymer are deposited and polymerized on the surface of a solid support having a surface coating with surface reactive sites, such that the resultant polymer is covalently linked to the surface reactive sites. As such, any anticipatory reference should disclose the following claim elements: a) a solid support having a surface coating with reactive sites for binding to a polymer (which, as defined in the specification on page 8, refers to an initiator attached to a surface that may or may not be activated or initiated for producing a polymer or attaching a pre-synthesized polymer); b) deposition of monomers on the surface of such a solid support; and, c) covalent linkage between the reactive sites of a surface coating and a polymer.

The Applicants respectfully submit that Heller *et al.* fails to disclose any of these elements, and, as such, cannot anticipate the instant claims. Reasoning in support of these assertions is provided below:

Heller *et al.* discloses a method in which an electrode is coated with a redox polymer that can bind a ligand.

Heller *et al.* describes that a “working electrode 10 is typically a thin film of conductive material disposed on an insulating substrate”. Col. 4, lines 51-52. Heller lists suitable substrates and suitable conductors in the two consecutive paragraphs starting at Col., line 51. Heller’s coating, i.e., Heller’s thin film of conductive material, does not contain initiators attached to a surface that may or may not be activated or initiated for producing a polymer or attaching a pre-synthesized polymer, i.e., surface reactive sites for binding to a polymer. As such, an element of the rejected claims, i.e., a solid support having a coating with surface reactive sites, is not disclosed by Heller.

Furthermore, Heller *et al.* describes the process of depositing a redox polymer on the surface of an electrode in the paragraph starting on line 61 of column 5. In this paragraph, Heller states: “The redox *polymer* 12 is deposited on the electrode 10” (italics added). Heller then provides methods by which a polymer can be directly deposited (e.g., electrophoresis). Heller does not, at any point, discuss a method in which *monomers* for a polymer are deposited on an electrode. As such, a second element of the rejected claims, i.e., deposition of a *monomer* for a polymer on the surface of a solid support, is not disclosed by Heller *et al.*

Finally, while Heller *et al.* describes depositing a polymer on the surface of a solid support, Heller *et al.* does not state that there is any covalent interaction between the surface coating of the solid support and the polymer. Since, as discussed above, Heller’s surface coating contains no reactive sites, covalent linking of Heller’s surface coating to a polymer

would not be possible. Since covalent linking of a polymer to the surface coating of a solid support is required by the claims, Heller fails to disclose yet another element of the claims.

In summary, Heller discloses methods that are quite different to those claimed, and, as such, fails to disclose at least three elements of the rejected claims. Since Heller fails to disclose at least three elements of the rejected claims, it cannot anticipate these claims.

In view of the foregoing discussion, withdrawal of this rejection is respectfully requested.

Rejection of claims under 35 U.S.C. § 102 (Heller PCT publication WO 99/67628)

Claims 31-33, 35-42 and 44-48 are rejected under 35 U.S.C. § 102(e) over Heller *and Co.* (PCT publication WO 99/67628). Specifically, the Office Action asserts that Heller *and Co.* discloses a process for preparing a solid support that anticipates the subject claims. The Applicants respectfully traverse this rejection.

Applicants note that Heller *and Co.* discloses an almost identical methods to Heller *et al.*, and, as such, like Heller *et al.*, fails to disclose: a) a solid support having a surface coating with reactive sites; b) deposition of monomers on the surface of such a solid support; and, c) covalent linkage between the surface reactive sites of a surface coating and a polymer.

As such, like Heller *et al.*, Heller *and Co.*, disclose methods that are quite different to those claimed, and, as such, fails to disclose at least three elements of the rejected claims. Since Heller *and Co.* fails to disclose at least three elements of the rejected claims, it cannot anticipate these claims.

In view of the foregoing discussion, withdrawal of this rejection is respectfully requested.

Rejection of claims under 35 U.S.C. § 102 (Heller PCT publication WO 99/67628)

Claims 34 and 43 are rejected 35 U.S.C. § 102(e) over Heller *and Co.* (PCT publication WO 99/67628), as defined by Heller *et al.* (USPN 6,281,006). Specifically, the Office Action asserts that Heller *and Co.* describes process for preparing a solid support that involves a polymer, which, in view of the description of that polymer set forth in Heller *et al.*, anticipates the subject matter of claims 34-43. The Applicants respectfully traverse this rejection.

In combining two references in a rejection under 35 U.S.C. § 102, the MPEP § 2131.01 states that:

Normally, only one reference should be used in making a rejection under 35 U.S.C. 102. However, a 35 U.S.C. 102 rejection over multiple references has been held to be proper when the extra references are cited to:

- (A) Prove the primary reference contains an "enabled disclosure;"
- (B) Explain the meaning of a term used in the primary reference; or
- (C) Show that a characteristic not disclosed in the reference is inherent.

Since Heller *et al.* (USPN 6,281,006) is being cited solely to provide a figure which the Office interprets as being a linear polymer, the secondary reference in this rejection neither proves that Heller *and Co.* contains an enabled disclosure, explains the meaning of a term in Heller *and Co.*, or shows the inherency of a characteristic not disclosed in Heller *and Co.*, the Applicants respectfully submit that this rejection is not proper.

However, regardless of the propriety of the rejection, as discussed above, Heller *and Co.* and Heller *et al.* disclose methods that are quite different to those claimed, and, taken separately or together, fail to disclose at least three elements of the rejected claims.

As such, Heller *and Co.* and Heller *et al.*, however they are combined, fail to disclose at least three elements of the rejected claims, and, as such, cannot anticipate the claimed invention.

In view of the foregoing discussion, withdrawal of this rejection is respectfully requested.

CONCLUSION

The Applicants respectfully submit that all of the claims are in condition for allowance, which action is requested. If the Examiner finds that a telephone conference would expedite the prosecution of this application, please telephone Timothy Joyce at (650) 485 4310.

The Commissioner is hereby authorized to charge any fees under 37 C.F.R. §§ 1.16 and 1.17 which may be required by this paper, or to credit any overpayment, to Deposit Account No. 50-1078.

Respectfully submitted,

Date: August 27, 2003

By: James S. Keddie
James S. Keddie, Ph.D.
Registration No. 48,920

Date: 8.27.03

By: [Signature]
Bret E. Field
Registration No. 37,620